

Manual Bag-Change Filtration Units (HEPA)

Wozair manufactures a range of radial and axial flow Manual Bag-Change HEPA Filter Units for use with HVAC extract systems where radioactive or other toxic effluents may be present.



Manual Bag-Change High Efficiency Particulate Air (HEPA) Filter Units

These filter housings are specifically designed, manufactured and tested for compliance with the latest industry standards but are suitable for a range of applications in both nuclear and commercial industries.

The housings can be manufactured to offer up multiple configurations regarding inlet and outlet discharge.

In systems with airflows greater than 950 l/sec, individual housings can be manifolded together to form a filter bank or by installing a multi-insert (EP2 style) bag change filter housing, accommodating up to 10 filters.

The designs are such that the HEPA filter can be changed using a bag-in, bag-out method without the risk of contamination to personnel and the environment.

Features & Benefits

- Plug-in radial filter housing complete with HEPA filter insert and change bag
- Manually operated inlet and outlet dampers providing isolation from the ventilation system to conduct the filter change
- In-bleed depression relief system to reduce the internal pressure to near room conditions to allow the access cover to be removed and to conduct the filter change
- Differential pressure tapping points to monitor filter condition connected to a pressure gauge and transmitter

Technical Information

Airflow

Individual filter housings are available in various arrangements to suit an airflow of up to 950 l/sec, (radial housing) and 500 l/sec (axial housing)

EP2 style filter housings are available in various arrangements to suit an airflow of up to 9,500 l/s.

Air Pressure

Filter housings are usually designed and tested to a maximum differential air pressure of 6,000 Pa.

Design Duty (Radial Housing)

Standard: 950 l/sec and 470 l/sec

Non-standard: 280 l/sec, 160 l/sec and 75 l/sec

Testing

Full NDT of all containment welds and case leak tested



Materials of Construction

Casing:

Stainless Steel 304L/316L (1.4307/1.4404)
White epoxy painted Carbon Steel

Flanges:

Filter housing casing is provided with 6 mm flat face flanges for bolting into high integrity ductwork. Alternate flange arrangements and flange thickness's can be considered on request.

Mechanical Options

- HEPA Filters
- Ferroxy testing
- Spark Arrestor stage
- Pre-filter stage
- Manifolds
- Supports
- Inlet and outlet Isolation Dampers
- Depression Relief Systems
- PVC filter change bags
- Mobile bag welder
- Scissor lift table

All filter housings are of a fully welded design using approved weld procedures and welders coded to BS EN ISO 9606-1.

Non-destructive testing (NDT) of welding can be performed on request.

Performance

Manual bag-change filter housings radial and axial

1. Radial straight through 180 degrees - 750 Pa clean and 1100 Pa dirty; Radial 90 degrees - 450 Pa clean and 800 Pa dirty
2. Radial housing Maximum operating pressure: 3 kPa
3. Radial; Volume flow rates offered
 - a. 75 l/s (150 cfm) (non-standard)
 - b. 160 l/s (340 cfm) (non-standard)
 - c. 280 l/s (600 cfm) (non-standard)
 - d. 470 l/s (1000 cfm)
 - e. 950 l/s (2000 cfm)
4. Axial housing pressure drop; 250 Pa clean and 500 Pa dirty typical for HEPA filter only
5. Manual bag-change housing; the units are generally designed in accordance with EG_0_1711_1 (Design Guide for filter housings for circular plug-in HEPA filters) to achieve the 99.25% efficiency to ES_0_1737_2, or rectangular deep pleat filters to ES_0_1732_2.

Ordering

Type: MBCR	Capacity: 950L
Material: 316L	Configuration: ST
Capacity: 75 l/s = 75L 160 l/s = 160L 280 l/s = 280L 470 l/s = 470L 950 l/s = 950L	Configuration: ST = Straight Through (180 Degrees) RE = Rear Entry (90 Degrees)
Type: Manual Bag-Change Radial = MBCR	
Case Material: <u>Stainless Steel</u> Low Carbon 1.4307 = 304L Low Carbon 1.4404 = 316L <u>Carbon Steel</u> White epoxy painted = PCS	
Order Code Example: MBCR/316L/950L/ST	

Type: MBCA	Capacity: 500L
Material: 316L	
Capacity 500 l/s = 500L	
Type: Manul Bag-Change Axial = MBCA	
Case Material: <u>Stainless Steel</u> 1.4307 = 304L 1.4404 = 316L <u>Carbon Steel</u> White epoxy painted = PCS	
Order Code Example: MBCA/316L/500L	

Type: MBCEP2	No of Filters: 4
Material: 316L	
EP2 Capacity 2 Filter = 1900 l/s = 1900L 3 Filter = 2850 l/s = 2850L 4 Filter = 3800 l/s = 3800L 6 Filter = 5700 l/s = 5700L 8 Filter = 7600 l/s = 7600L 10 Filter = 9500 l/s = 9500L	
Type: Manual Bag-Change Multi Filter = MBCEP2	
Case Material: <u>Stainless Steel</u> 1.4307 = 304L 1.4404 = 316L <u>Carbon Steel</u> White epoxy painted = PCS	
Order Code Example: MBCEP2/4/316L/3800L	

Additional Images

Radial housings



Axial housings



Wozair Limited

Grosvenor Road
Gillingham Business Park
Gillingham
Kent
ME8 0SA
United Kingdom

Phone +44 (0)1634 790 336

Email hvac@wozair.com

Wozair (USA) Ltd

3601 North Loop
336 West
Conroe
Texas
77304
United States of America

Phone +1 936 521 5990

Email houstonhvac@wozair.com

Wozair (Asia) Pte Ltd

2 Venture Drive
8-23 Vision Exchange
608526
Singapore

Phone +65 6890 6506

Email hvac@wozair.com.sg

Wozair Middle East

JAFZA One
Tower B, Office 1316
Jebel Ali Free Zone
Dubai, UAE
P.O. Box 262404

Phone +971 (0) 4 887 0147

Email dubaihvac@wozair.com